

Urban Metabolism in Policy and Practice

The goal of the three seminars

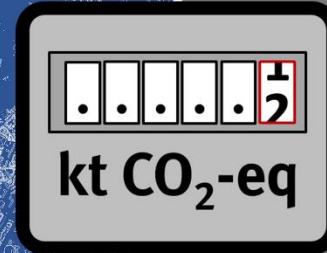
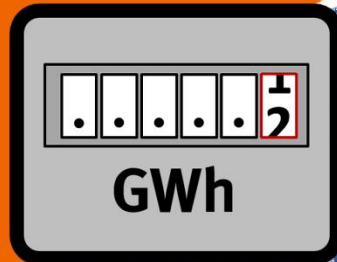
Aristide Athanassiadis – May 9th 2019



ECOLE
POLYTECHNIQUE
DE BRUXELLES



ENERGY



GHG EMISSIONS

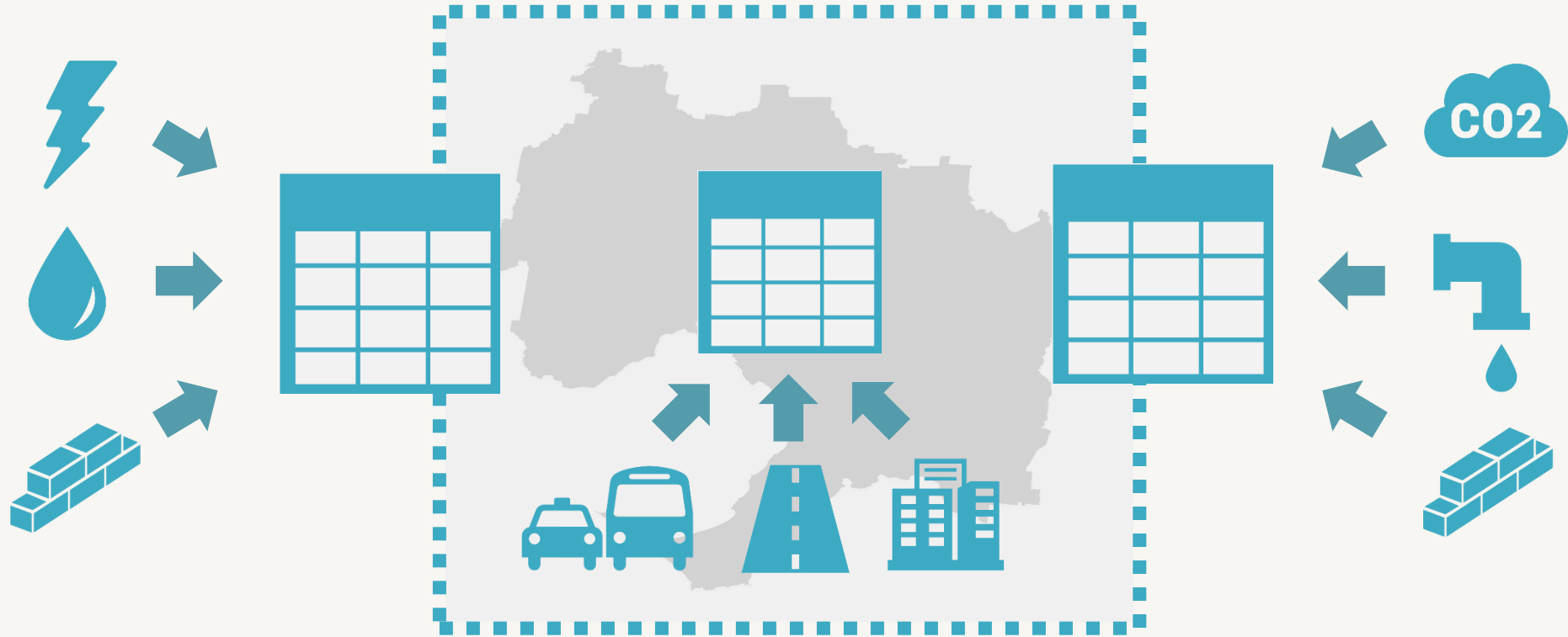
Urban Metabolism: a diverse research field



=



Urban Metabolism



Research field (unconsolidated) studying flows and actors from a systemic perspective

Urban Metabolism: **a tool for city officials**

PROGRAMME RÉGIONAL EN ÉCONOMIE CIRCULAIRE

2016 – 2020

*Mobiliser les ressources et minimiser les richesses perdues :
Pour une économie régionale innovante*



Mars 2016

MAIRIE DE PARIS



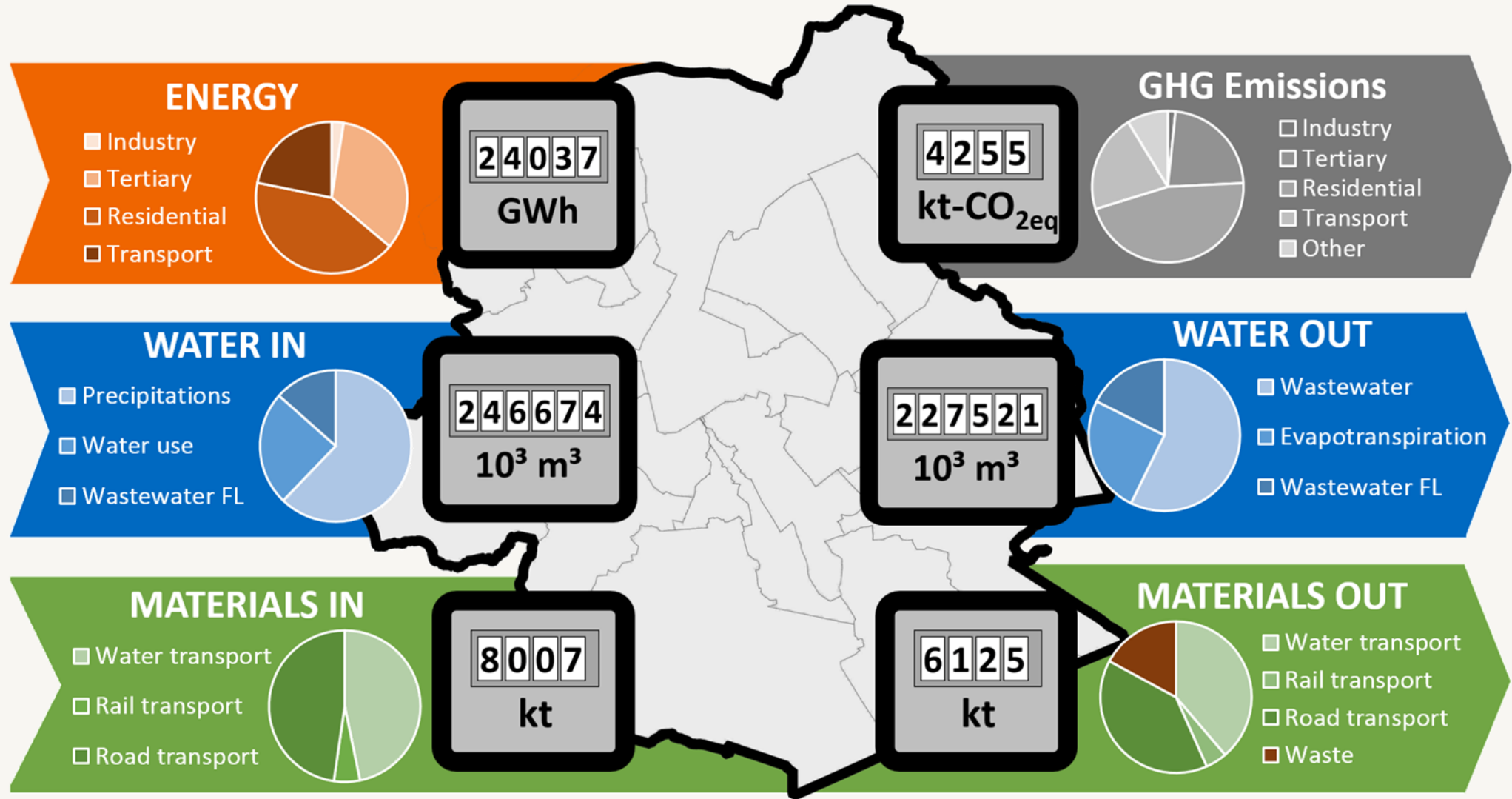
LWARB
London Waste and Recycling Board



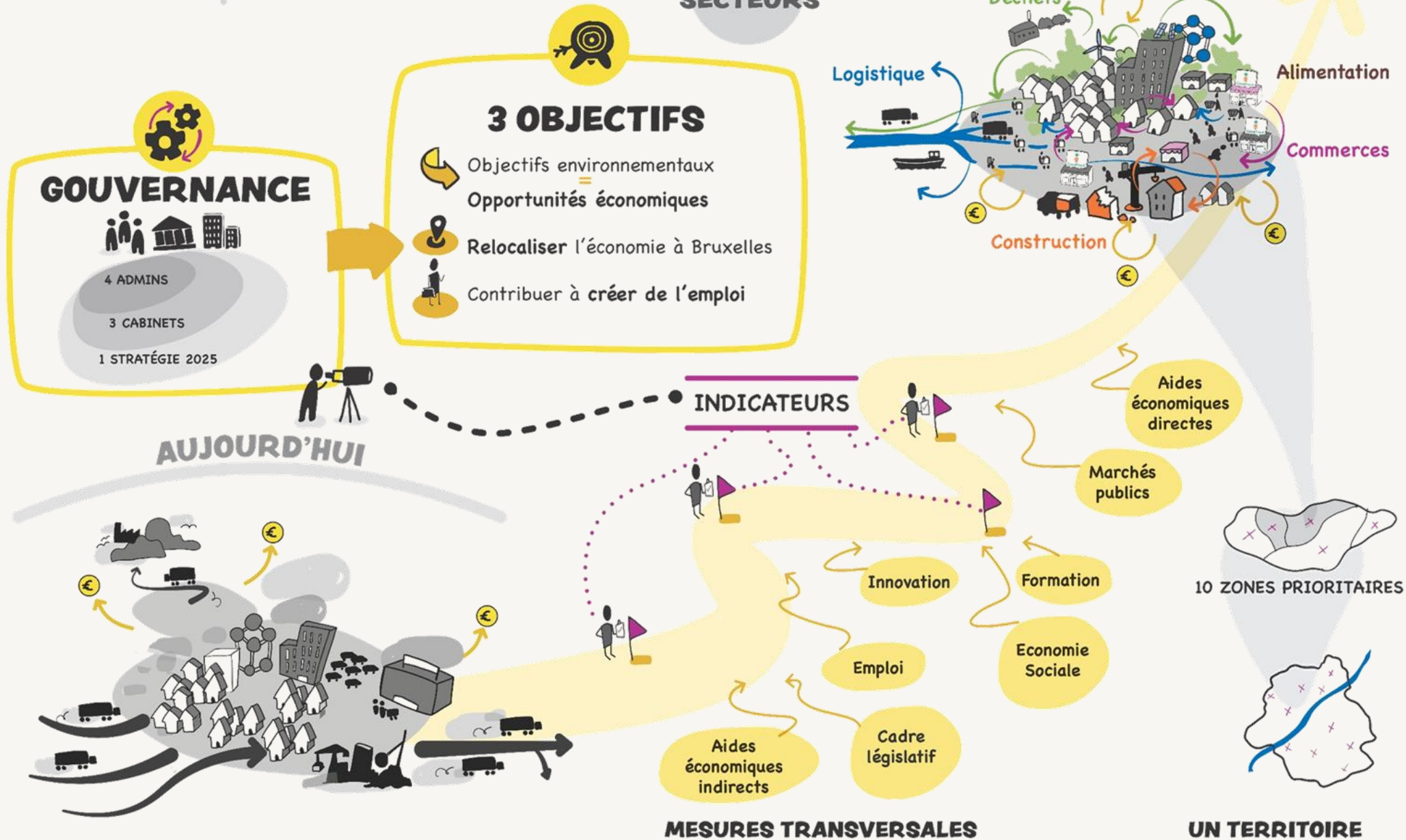
LONDON'S CIRCULAR ECONOMY ROUTE MAP

© Circular London

An analytical tool for circular economy



Brussels' metabolism in 2010





Matières



Des flux linéaires aux flux circulaires

La majorité des flux (consommation de matières ou de produits, production de déchets ou émission de pollutions) sont dits linéaires car ils ont des origines et des destinations externes au territoire. Le recyclage, la valorisation de matière, organique ou énergétique sont eux qualifiés de circulaires. Au lieu d'être exportés vers le reste du monde ou rejetés vers la nature, ces flux sont redirigés vers l'économie du territoire. De l'économie circulaire, en somme.

Urban Metabolism of Paris

10 000 kt/an





Circular Economy Plan of Paris

Urban Metabolism: **in practice**



Source: <http://www.circulareconomy.brussels/bc-materials-bc-materials-de-la-terre-dexcavation-au-materiau-de-construction/#images-2>

Local practices



Plateforme des Acteurs

pour le **Réemploi** des Éléments de Construction à Bruxelles

Local practices



Circular Charlotte



Circular DGTL Festival: Amsterdam
2018



Circular Rotterdam



Monitoring Circularity in the
Metropolitan Region of Amsterdam



Noord-Nederland Circulair



Circular Vlieland: Island Scan

Consultancies / Services

CIRCLE CITIES PROGRAMME

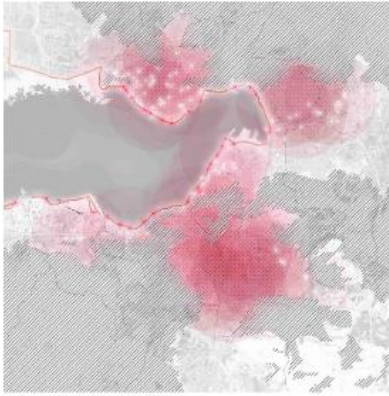
Creating value from the start by designing cities of the future

[contact us](#)

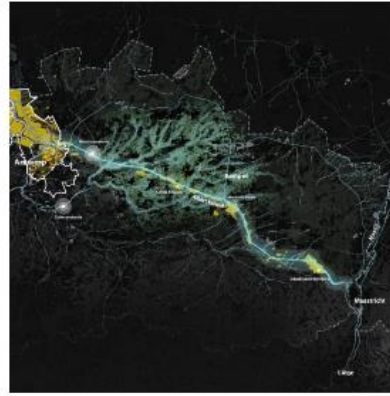


Program

Consultancies / Services



IZMIR CYCLING SCAN –
Turkey



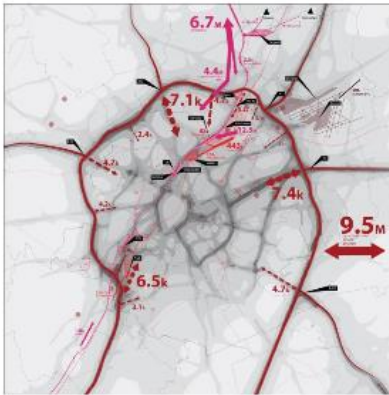
THE METABOLISM OF
ANTWERP



NINGO-PRAMPARAM
EXPANSION – Ghana



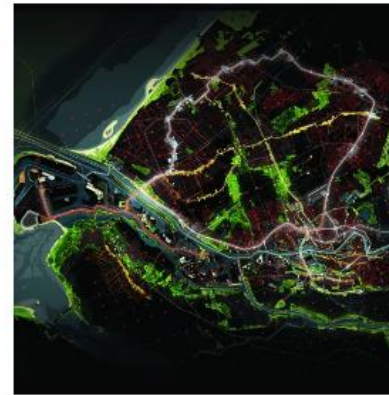
METABOLISM OF
ALBANIA



METABOLISM OF
BRUSSELS



ATELIER STAD – Breda



URBAN METABOLISM –
Rotterdam

Landscape – Urban planning

Goals of the seminars series

Urban metabolism is an academic field with significant potential to influence urban development and policy. Urban metabolism methodologies have long been used to better understand resource requirements and impacts in a city, for instance through material flow or ecological footprint analyses. With the surging interest in circular economy, urban metabolism (and other industrial ecology principles) may be able to play a pivotal role in providing a scientific foundation to sustainability transformations. However, a fundamental yet unanswered question is how urban metabolism principles can be translated to on-the-ground interventions, policy recommendations, and tools that directly influence and improve urban sustainability.

In collaboration between Metabolism of Cities and local partners, three different one-day seminar events will be organised in 2019. During this event conversations, presentations, and discussions will take place with a focus on the local city and how urban metabolism practices could be better applied in this city. During this day we will look at the challenges, the ambitions, and the opportunities that exist in each city, and we aim to bring together a group of people from government, academia, and practice. We will be focusing on getting a more systematic understanding of the local city's resources and the relationship between different resources and how they flow through the city, with a specific focus on locally specific environmental challenges.

The seminars will take place in Cape Town (May 2019), Beijing (July 2019) and Brussels (October 2019). This seminar series is funded by the Urban Studies Foundation.



Cape Town

South Africa

May 9, 2019

[Read more](#)



Beijing

China

July 6, 2019

[Read more](#)



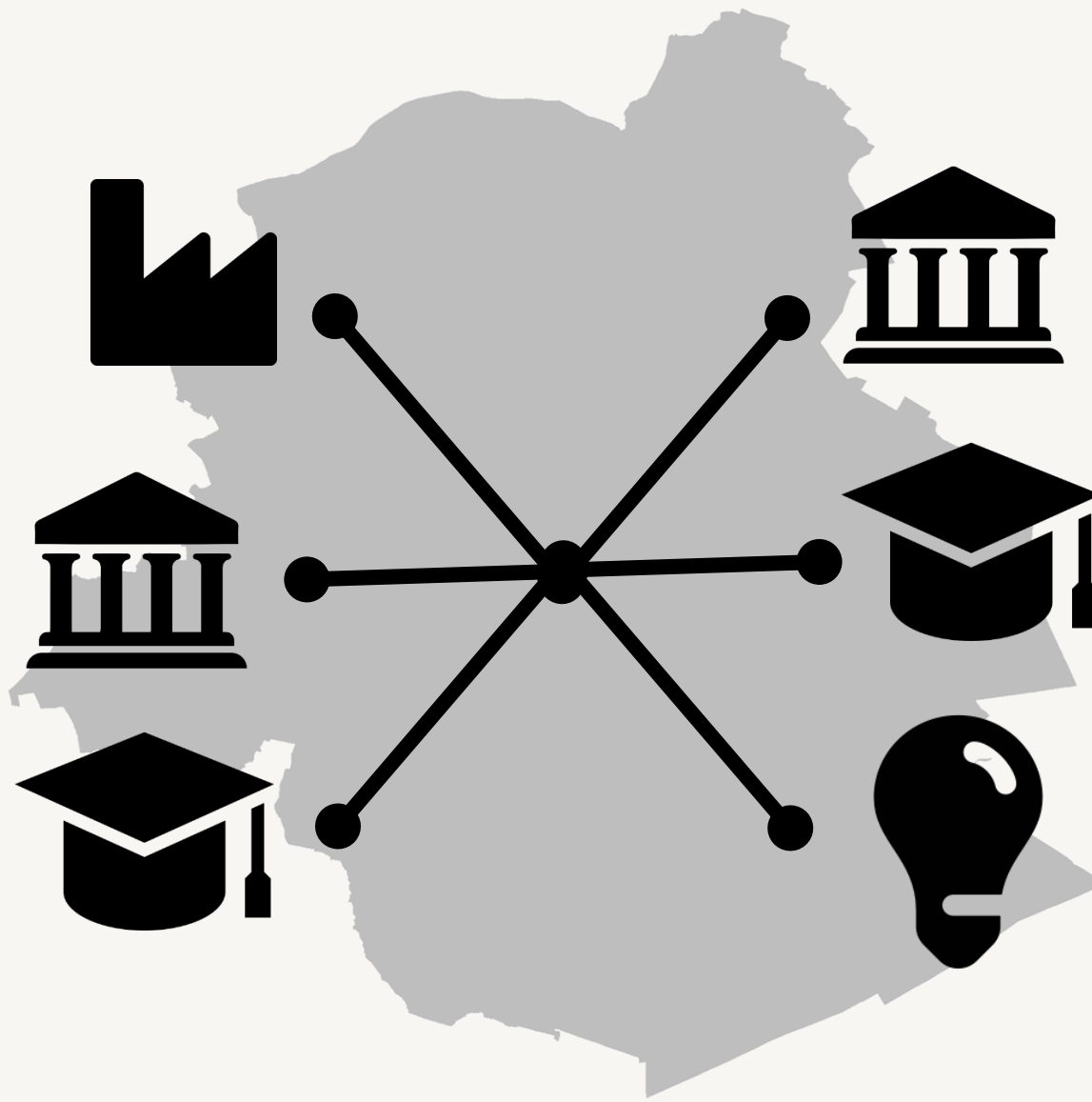
Brussels

Belgium

October 2019

[Read more](#)

This seminar series is supported by a Seminar Series Award from the [Urban Studies Foundation](#).



Better science-policy-practice interface

**Develop tools for
collaboration**



Introduction

Overview

Module 0: Welcome to the course

Module 1: Introduction

Module 2: Accounting methodologies and indicators

Module 3: Case studies

Module 4: Urban metabolism policies

Module 5: Final quiz

[Syllabus](#)

Feedback

Urban Metabolism for Policy Makers

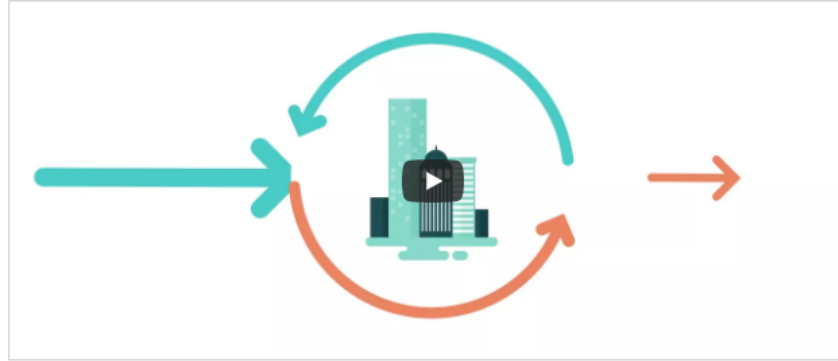
Welcome to the first online course on Urban Metabolism for Policy Makers!

The world is urbanising rapidly. In 2009, the number of people living in cities (around 3,5 billion) surpassed the number living in rural areas. While the urban population is hosted only on 3% of global land area, it is also responsible for over 70% of natural resources and energy use and for 60% pollution emissions and waste generation. While cities are responsible for the greatest share of man-made environmental impact, they are also the places 80% of global GDP is produced and are the nodes of innovation. Therefore, the fight against climate change will be won or lost in cities.

Yet, cities are extremely complex systems where social, economic, political, territorial, ecological, resource, waste, etc. challenges coexist. Urban metabolism is way to look at cities from a systemic point of view linking all the above mentioned challenges. This metaphor conceptualises the city as living organism where resource flows enter, are transformed or stocked and waste flows exit the territory.

This course is targeting policy makers who are interested in learning how urban metabolism can help them develop more comprehensive and system urban policies in order to meet the Paris Agreement targets.

To know what Urban Metabolism is, have a look at the following video!



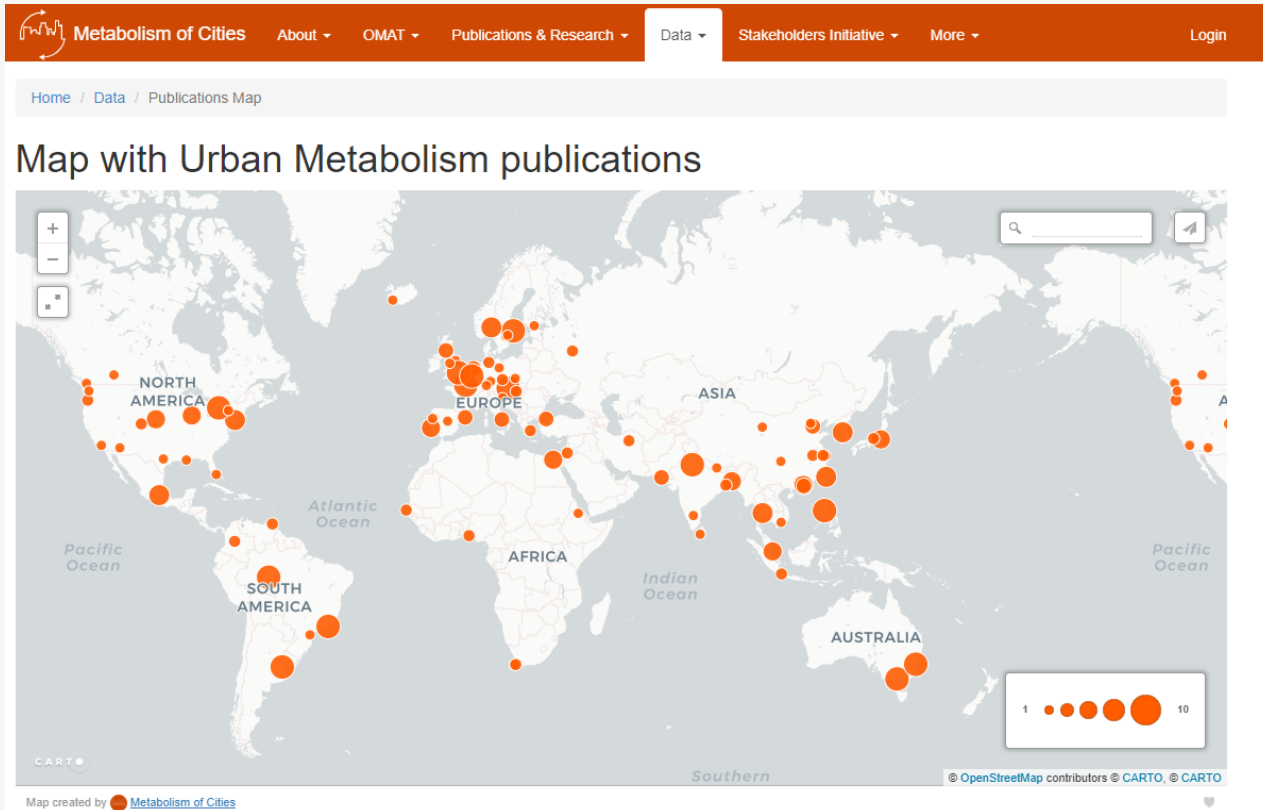
This is the first MOOC provided by the [GI-REC](#) (Global Initiative for Resource Efficient Cities). The GI-REC is a cooperation platform offered by [UN Environment](#) to connect different institutions that are using systems approach (and specifically urban metabolism) towards building low-carbon, resilient and resource efficient cities. This MOOC is produced and run for you by [Metabolism of Cities](#), in partnership with the [League of Cities of the Philippines](#) and UN Environment.



Understand

<https://metabolismofcities.org/mooc>





<https://metabolismofcities.org/page/map>

Metabolism of Cities About OMAT Publications & Research Data Stakeholders Initiative More Login

Home / Data / Data Overview

Global Urban Metabolism Data

148
Case Studies

465
Total Indicators


8,973
Data Points

Data Overview Indicators Filter Data Download Data

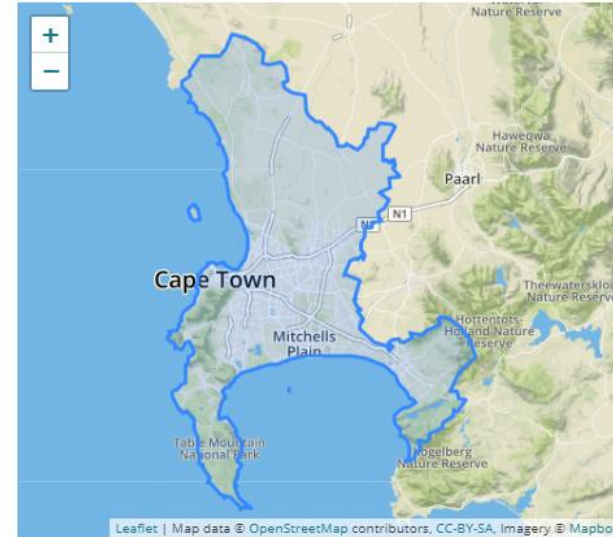
City	Qty	Year	Publication	Authors
Ahmedabad	1	2011	Cities and greenhouse gas emissions: movin...	Hoomweg, Daniel and Sugar, Lorraine and Tr...
Amman	1	2011	Cities and greenhouse gas emissions: movin...	Hoomweg, Daniel and Sugar, Lorraine and Tr...
Athens	1	2011	Cities and greenhouse gas emissions: movin...	Hoomweg, Daniel and Sugar, Lorraine and Tr...
Austin	1	2011	Cities and greenhouse gas emissions: movin...	Hoomweg, Daniel and Sugar, Lorraine and Tr...
Avellaneda	1	2011	Cities and greenhouse gas emissions: movin...	Hoomweg, Daniel and Sugar, Lorraine and Tr...
Baltimore	1	2011	Cities and greenhouse gas emissions: movin...	Hoomweg, Daniel and Sugar, Lorraine and Tr...
Bangalore	1	2011	Cities and greenhouse gas emissions: movin...	Hoomweg, Daniel and Sugar, Lorraine and Tr...
Bangalore	6	2014	Urban Metabolism of Six Asian Cities	Paulo Ferrao and João Fumega and Nuno Go...
Bangkok	1	2011	Cities and greenhouse gas emissions: movin...	Hoomweg, Daniel and Sugar, Lorraine and Tr...
Bangkok	7	2014	Urban Metabolism of Six Asian Cities	Paulo Ferrao and João Fumega and Nuno Go...
Barcelona	1	2011	Cities and greenhouse gas emissions: movin...	Hoomweg, Daniel and Sugar, Lorraine and Tr...
Beijing	1	2011	Cities and greenhouse gas emissions: movin...	Hoomweg, Daniel and Sugar, Lorraine and Tr...
Beijing	141	2015	Energy and material flows of megacities	Kennedy, Christopher A. and Stewart, Iain an...

<https://metabolismofcities.org/page/casestudies>

Share

CAPE TOWN Overview Sectors > City profile > Resources > Upload

Cape Town
South Africa

**Resources****Datasets**

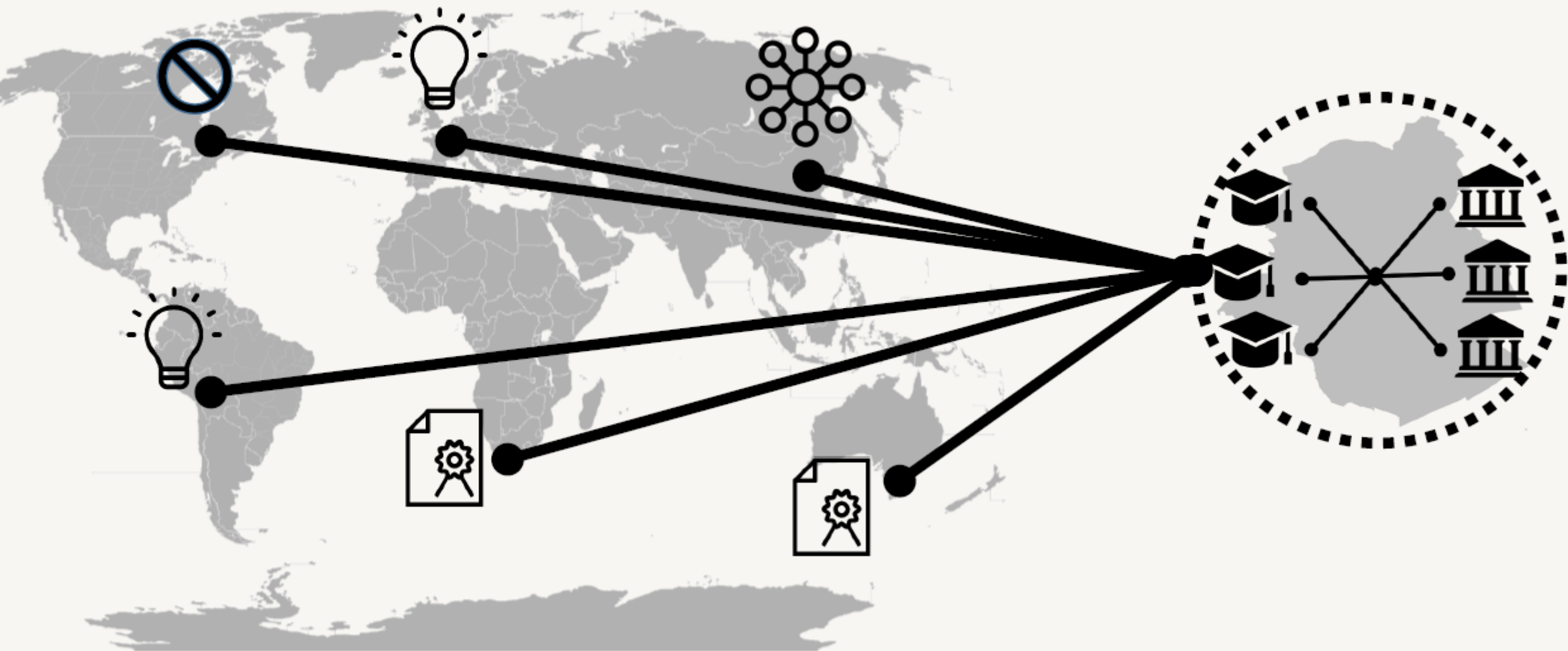
Explore datasets on material flows, stocks, consumption, and more

**Maps**

View boundaries, micro-territorial units, infrastructure maps, and more

**Journal articles****Browse by sector...****Agriculture****Construction****Energy****Fishing****Forestry**

Analyse



Connect

Communicate

<https://sites.google.com/site/circularmetabolismcommunity/>

[NEW TOPIC](#) [Refresh](#) [Mark all as read](#) [Actions](#) [Filters](#) [Help](#)

[Search](#)

In May of 2019, we'll be merging and deprecating some of our settings to make group management easier. [Learn more](#)

Circular Metabolism Community [Shared privately](#) [Membership and email settings](#)

7 of 7 topics (2 unread) [Tags](#) · [Members](#) · [About](#)

Welcome to the Discussion Forum of the Circular Metabolism Community.


This community is impulsed by the Chair of Circular Economy and Urban Metabolism of the Université Libre de Bruxelles (<http://circularmetabolism.com>) which role is to foster and strengthen the exchanges between policy, practice and academic actors in order to implement actions that will hopefully make Brussels' economy and metabolism more circular.


We hope that through this community will be able to take stock on all the exciting efforts carried out around circular economy and urban metabolism in Belgium and create a consolidated knowledge base which will serve as a foundation for a science-policy-practice interface.


The discussion forum serves as an online communication tool to keep the discussion and debate going. Please feel free to create new topics, advise the community for new events, propose new ideas/projects, be critical on existing ones, etc.

Cheers,
Aristide and Stephan

[Edit welcome message](#) [Clear welcome message](#)

☐  **Resources**
By me - 14 posts - 56 views Apr 26

☐  **FYI workshop June 6 on the monitoring challenges in CE and sustainability (1)**
By lalaerts@ovam.be - 1 post - 4 views Apr 26

☐  **Funding (2)**
By me - 2 posts - 15 views May 8

Circular Metabolism Community

[Today](#) [Previous](#) [Next](#) [May 2019](#) [Week](#) [Month](#) [Agenda](#)

Mon	Tue	Wed	Thu	Fri	Sat	Sun
29	30	May 1	2	3	4	5
6	7	8	9	10	11	12
Science Technology Society Conference - Session 18: Is 1						
13	14	15	16	17	18	19
13th Conference of the International Society for Industrial Ecology (ISIE) - Socio-Econ Deadline Call for projects "R						
20	21	22	23	24	25	26
27	28	29	30	31	Jun 1	2

Many thanks

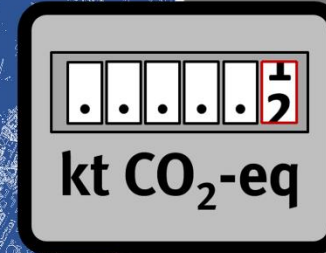
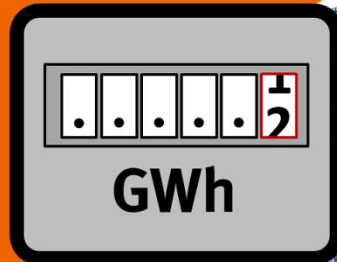
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